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10/695,203	10/28/2003	Rudolf J. Hofmeister	15436.253.68.1	4499

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EXAMINER

WANG, QUAN ZHEN

ART UNIT	PAPER NUMBER
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2613

MAIL DATE	DELIVERY MODE
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11/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/695,203

Applicant(s)

HOFMEISTER ET AL.

Examiner

Quan-Zhen Wang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 6-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 6-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6-13, and 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al. (U.S. Patent US 6,580,531 A1 B1) in view of Thatcher et al. (U.S. Patent US 5,757,998).

Regarding claims 1 and 13, Swanson discloses an optical subassembly testing apparatus (figs. 1 and 7) configured to evaluate an optical subassembly, the apparatus comprising: a base member (inherent, not shown in the figs.); a test circuit (figs. 1 and 7, the combination of test controller 14, communication analyzer 24, wave meter 30, power meter 36, and BER tester 52) disposed on the base member; an electrical interface (figs. 1 and 7, interface 20 and connection between the optical transceiver board 10 and BER tester 52) disposed in electrical communication with the test circuit, the electrical interface configured to be connected to the optical subassembly (fig. 1, optical transceiver board 10); and transmitting a data stream through the optical subassembly and evaluating the data stream (figs. 1 and 7). Swanson differs from the claimed invention in that Swanson does not specifically disclose that the optical subassembly and the connection between the optical subassembly and the test circuit

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board is temporal. However, Swanson further discloses that the optical assembly is employed within in an optical communication device (column 4, lines 24-28).

Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to configure the testing apparatus of Swanson to temporarily connection the optical subassembly to the test board in order to easily disconnect the optical assembly from the testing apparatus and place the optical assembly within in an optical communication device after the assembly passes the test. The system of Swanson differs from the claimed invention in that Swanson does not specifically disclose that the circuit comprises a flexible circuit. However, a flexible circuit is well known in the art. For example, Thatcher discloses to include a flexible circuit in the optical transceiver units. Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a flexible circuit, as it is disclosed by Thatcher, in order to provide a normal force to the temporal connection.

Regarding claims 3, 6, and 24, Swanson discloses that the subassembly is one of TOSA (fig. 1, optical transmitter 8) and ROSA (fig. 7, optical receiver 9).

Regarding claims 7 and 18-22, Swanson further discloses using optical transmitter or receiver and an analyzer (figs. 1 and 7, transmitter 51, receiver 48, and BER tester 52, note that BER tester is also a pattern generator).

Regarding claims 8 and 23, Swanson further discloses to transmitting the results of the evaluation to a computer (figs. 1 and 7, test controller 14).

Regarding claim 9, Swanson discloses converting the optical signal from the TOSA back to an output electrical signal, and comparing the input electrical signal with the output electrical signal (fig. 1).

Regarding claim 10, Swanson discloses that the optical subassembly is a receiver optical subassembly (ROSA) wherein transmitting a data stream through the ROSA comprises sending a data stream in the form of an input optical signal through the ROSA, wherein the ROSA outputs a corresponding data stream in the form of an electrical signal (fig. 7)

Regarding claims 11 and 12, as they are understood in view of the above 112 problems, the evaluation process of Swanson inherently comprising transmitting the electrical signal from the secondary circuit (the circuitry connected to the optical transceiver 10 to the interface 20) the test circuit; and transmitting the electrical signal from the test circuit to a computer (figs. 1 and 7).

3. Claims 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al. (U.S. Patent US 6,580,531 A1 B1) in view of Thatcher et al. (U.S. Patent US 5,757,998), and further in view of Barror (U.S. Patent US 6,765,396 B2).

Regarding claims 14-17, the modified system of Swanson and Thatcher differs from the claimed invention in that Swanson and Thatcher do not specifically disclose to temporarily place the subassembly in temporary electrical connection using a clamping assembly. However, it would be obvious and common knowledge to temporarily place the subassembly in temporary electrical connection using a pivotal or slidable clamping

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assembly. For example, Barror disclose to temporarily place the subassembly in temporary electrical connection using a clamping assembly (fig. 2). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate a clamping assembly, as it is disclosed by Barror, in the modified system of Swanson and Thatcher to temporarily place the subassembly in temporary electrical connection in order to perform the test for the optical subassembly and replace any defective optical components in the subassembly before the final package is completely assembled.

4. Claims 25-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swanson et al. (U.S. Patent US 6,580,531 A1 B1) in view of Thatcher et al. (U.S. Patent US 5,757,998) and Barror (U.S. Patent US 6,765,396 B2), and further in view of Pietrzak et al. (U.S. Patent US 4,852,706).

Regarding claim 25, the modified system of Swanson and Thatcher differs from the claimed invention in that Swanson and Thatcher do not specifically disclose to temporarily place the subassembly in temporary electrical connection using a clamping assembly. However, it would be obvious and common knowledge to temporarily place the subassembly in temporary electrical connection using a pivotal or slidable clamping assembly. For example, Barror disclose to temporarily place the subassembly in temporary electrical connection using a clamping assembly including a link member, a head member, and a clamp member (fig. 2). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to incorporate a

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clamping assembly, as it is disclosed by Barror, in the modified system of Swanson and Thatcher to temporarily place the subassembly in temporary electrical connection in order to perform the test for the optical subassembly and replace any defective optical components in the subassembly before the final package is completely assembled. The modified system of Swanson, Thatcher, and Barror differs from the claimed invention in that Swanson, Thatcher, and Barror do not specifically show that the clamp assembly includes a lever. However, it is well known in the art to include a lever in a clamping assembly. For example, Pietrzak discloses a clamping assembly including a lever (figs. 3 and 4). Therefore, it would have been obvious for one of ordinary skill in the art at the time when the invention was made to include a lever in the clamping assembly with no change in the functions of the clamping assembly and the lever. One of ordinary skill in the art would have motivated to do so in order to manually operate the clamping assembly to temporarily hold an optical subassembly under test.

Regarding claim 26, Barror discloses that the clamping assembly has a plurality of pivot points (figs. 2-4) enabling the clamping assembly to engage the optical subassembly at the electrical interface with at least a connecting force and a locking force, the locking force is inherently greater than the connecting force.

Regarding claims 27 and 29-31, Swanson further discloses that an analyzer (figs. 1 and 7, BER tester 52; note that BER tester is also a pattern generator) is connected to the optical subassembly (figs. 1 and 7, transceiver board 10).

Regarding claims 28 and 32, Swanson further discloses to transmitting the results of the evaluation to a computer (figs. 1 and 7, test controller 14).

Response to Arguments

5. Applicant's arguments with respect to claims 1, 3, and 6-24 filed on August 31, 2007 have been considered but are not persuasive.

Applicant argues, "Swanson does not teach or suggest having a flexible circuit disposed between the OSA and the electrical interface". However, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). For the instant case, Swanson discloses an optical subassembly testing apparatus (figs. 1 and 7) configured to evaluate an optical subassembly, the apparatus comprising: a base member (inherent, not shown in the figs.); a test circuit (figs. 1 and 7, the combination of test controller 14, communication analyzer 24, wave meter 30, power meter 36, and BER tester 52) disposed on the base member; an electrical interface (figs. 1 and 7, interface 20 and connection between the optical transceiver board 10 and BER tester 52) disposed in electrical communication with the test circuit, the electrical interface configured to be connected to the optical subassembly (fig. 1, optical transceiver board 10); and transmitting a data stream through the optical subassembly and evaluating the data stream (figs. 1 and 7). Swanson differs from the claimed invention in that Swanson does not specifically disclose that the circuit comprises a flexible circuit. However, a flexible circuit is well known in the art. For example, Thatcher discloses to include a flexible circuit in the optical transceiver units. Therefore, it would have been obvious for

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one of ordinary skill in the art at the time when the invention was made to include a flexible circuit, as it is disclosed by Thatcher, in order to provide a normal force to the temporal connection.

Applicant argues, "Thatcher, which is used by the Office Action to show the use of flexible circuits, does not teach a flexible circuit as recited in claim 1". Examiner respectfully disagrees. For the instant case, as it is clearly shown in the above rejections, Swanson discloses an optical subassembly testing apparatus which comprises all the claimed limitations except that Swanson does not specifically disclose that the circuit comprises a flexible circuit. However, a flexible circuit is well known in the art and is widely used to connect components. Thatcher is cited as one example to show that a flexible circuit is used in an optical transceiver to connect components. One of ordinary skill in the art would have utilized the flexible circuit of Thatcher with no change in the function of the flexible circuit and the testing system of Swanson and connected the test apparatus and the optical subassembly under test. Therefore, the combination of the prior art references discloses each and every claimed limitation and Examiner has clearly established a *prima facie* case. The rejections of claims 1, 3, and 6-12 still stand.

Regarding claims 13-14, Applicant argues that "base member" is not inherent in Swanson. Examiner respectfully disagrees. As it is realized by Applicant, "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." For the instant case, one of ordinary skill in the

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art would have not been capable to form the optical test apparatus of Swanson could by floating the components of the apparatus in the air. A base member is "necessarily present" in the apparatus of Swanson to hold the components in order to form the testing apparatus. There is no doubt that the "base member" is inherent in Swanson. Therefore, the rejections still stand.

6. Applicant's arguments with respect to claims 25-32 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Burton et al. (U.S. Patent US 4,911,519) discloses an advance packaging techniques, in which optical assembly is tested for satisfactory operation.

Takai et al. (U.S. Patent US 5,548,399) discloses a method and apparatus for testing a DC coupled optical receiver.

Jackson et al. (U.S. Patent US 5,345,230) disclose a method and apparatus for optical transceiver testing.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quan-Zhen Wang whose telephone number is (571) 272-3114. The examiner can normally be reached on 9:00 AM - 5:00 PM, Monday - Friday.

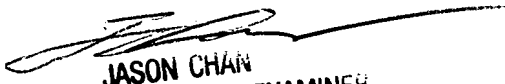
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

qzw

11/1/2007


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